

From: Ex. 6 Personal Privacy (PP)
Sent: 8/8/2019 8:40:21 PM
To: RecycledTireCrumb [RecycledTireCrumb@epa.gov]
Subject: Fwd: Questions - Recycled Tire Crumbs Research

Ms. Widener

It is a great relief that the EPA is doing this research and that the public can review it! I have a few questions for you and the EPA team working on this very important project.

1. Soccer goalkeepers spend more time than almost all other athletes intensely interacting with the recycled tire beads. They practice drill after drill of diving, sliding and having beads and crumb rubber dust kicked or showered into their faces or open cuts on a daily basis. I'm aware of goalkeepers that have beads in their eyes that have rolled into the backs of their eye sockets for hours and sometimes days. Will the impact of these beads on goalkeepers, and other athletes that interact intensely with the recycled tire crumbs be more closely examined?
2. Will the EPA research all the soccer goalkeepers and field players on Ami's list? Ami Griffen is the Assoc. Head Soccer Coach at the UNIVERSITY of WASHINGTON. **Her list of 200 athletes with cancer contained 150 soccer players, 95 of whom were goalkeepers. She has compiled data about athletes with cancer who have played on crumb rubber artificial turf fields. All players on her list trained and played games on the recycled tire bead-filled artificial fields.** Griffin played for the USNWT from 1987–1991 and has coached top-level soccer on artificial turf fields for decades.
3. Will there be different levels of analysis of recycled tires impact on children, young adults, and older athletes? Will the analysis review different levels of contact with the recycled tire beads - Such as; 'Level 1 interaction = GK's, RB's and toddlers playing on playgrounds 'Level 2 = field players for all sports. Level 3 - Joggers, Walkers and those least likely to fall or dive into the recycled tire crumbs.
4. Will the crumb rubber be re-examined when played on at temperatures over 100 degrees Fahrenheit? Maryland fields get that hot and MUCH hotter sometimes. As the planet gets warmer, so will the beads. An examination in July of 2019 would have been great. Pro teams currently water the artificial turf fields at halftime to cool them off. Will the concentration of organic chemicals that are known to vaporize during the summer heat, such as PAHs be more thoroughly measured at hotter temperatures?
5. Will specific companies or brands of recycled crumb tires be examined for the number of toxins per brand? Are there companies that use recycled crumb tires that contain fewer toxins? Will this be examined in 'part 2' of the report? Companies like 'Nike Grind', 'First Form', TurfAssist, etc. Can there be a recommendation to get away from tire and truck beads and use organic crumbs or other artificial alternatives on the fields? There are companies out there, that make fields that are almost 100% organic. Will non-crumb rubber artificial turf systems be examined? Surfaces made out of sand, coconut shells and zeolite which is a volcanic rock that is sandlike and absorbs water, sweat, blood, etc.
6. Will there be recommendations for athletes that interact most with the recycled tire crumbs? For example, 'Wear long-sleeve clothing and shower after practice', 'Practice on grass whenever possible'. Wear eye goggles or some other kind of protection when on these fields.

7. Will Dr. Diana Zuckerman, PhD, National Center for Health Research, be interviewed for Part 2 of the study?

On 2/8/18, Dr. Zuckerman made the following comments before the Maryland House of Delegates on the Health Risks of Artificial Turf "Artificial turf is made from synthetic rubber, plastic, and other materials with known health risks. For example, the widely used material known as crumb rubber or tire crumb includes carcinogens as well as chemicals that disrupt our body's hormones. These are called endocrine-disrupting chemicals, and studies show that they contribute to early puberty, obesity, and attention deficit disorder. Since breast cancer and several other cancers are fed by estrogen and other hormones, these materials can also cause cancer in the long-term. Some endocrine-disrupting chemicals have been banned by Federal law from toys and other products for young children. It does not make sense that chemicals banned from rubber duckies, teething toys, and other products used for a relatively short period of time by children are allowed in playing fields and playgrounds where children are exposed day after day, week after week, and year after year."

8. When will 'Part 2' be completed? We are counting on the EPA to move quickly and thoroughly to accurately complete Part 2 For decades there was no evidence that smoking caused cancer or that Agent Orange caused cancer, Many people are very concerned that recycled tires will someday be included in that group.

I am eagerly awaiting your answers to my questions. So many athletes, parents, and grandparents hope that the specific impact on the athletes and children that interact most with the recycled tire beads (especially Soccer Goalkeepers, Football Running-backs and toddlers) can be closely examined in Part 2 of the EPA study.

Thank you in advance for your time and work on this very important topic!

Tom Wieber